MIT's Oldest and Largest Newspaper

*thetech.com*

# The Tech

Established 1881

**WEATHER, p. 2**

FRI: **79°**F | **65°**F Partly Sunny.

SAT: **79°**F | **61°**F Mostly Cloudy.

SUN: **69°**F | **52°**F Mostly Sunny.

# DSL releases three-phase plan for graduate students' return

*Returning students are to self-quarantine up to 14 days or take two COVID-19 tests one week apart*

**By Cami Mejia**
STAFF REPORTER

Chancellor Cynthia Barnhart PhD' 88, Vice President for Research Maria Zuber, Vice President and Dean for Student Life Suzy Nelson, and Associate Provost Krystyn Van Vliet PhD '02 outlined graduate students' return to campus in an email to graduate students May 20.

They wrote that the Division of Student Life (DSL) plans to reduce graduate student residences to 85% density in the upcoming academic year. Based on input from MIT Medical and "other experts," the DSL "reviewed the varied living environments of graduate student residence halls and devised scenarios with low student-to-bathroom and kitchen ratios in order to reduce the risk of community spread of COVID-19."

Graduate students who have already renewed their housing for the upcoming academic year will not be affected by the density reduction, they wrote.

The DSL website writes that the graduate student return plan consists of three stages:

1. Students in private apartments like family housing, one-bed-
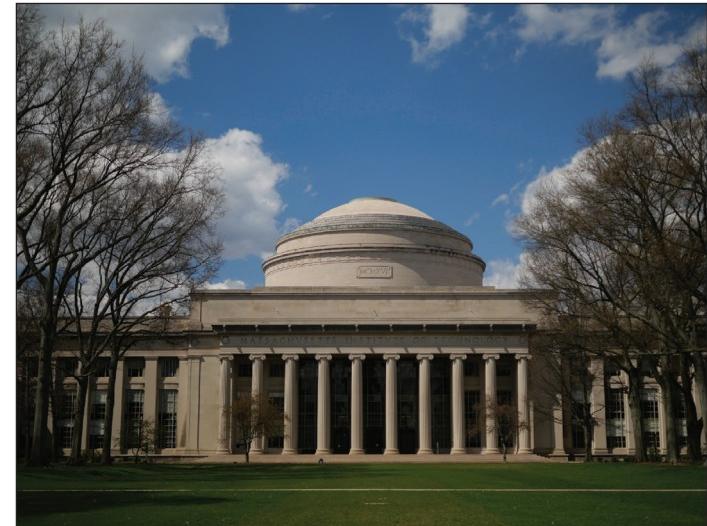
*KEVIN PHO— THE TECH*

**A largely empty campus remains closed** after students left MIT.

# Waitz holds meeting to discuss faculty input on the fall

*Multiple departments report that a fully remote fall semester is 'doable but less than ideal'*

**By Kerri Lu**
NEWS EDITOR

MIT administrators discussed department input about teaching scenarios for the fall at a meeting hosted by Vice Chancellor Ian Waitz

May 8. The presentation notes can be found in a Dropbox folder created by the Undergraduate Association (UA).

Waitz wrote in an email to *The Tech* that he regularly hosts virtual meetings with about 175 people,

including MIT administrators, department heads, head of house, and UA and Graduate Student Council officers. The meetings started March 9 and were originally held daily, but were held three times a week as of last week.

Waitz and Tony Sharon, acting deputy executive vice president, lead Team 2020, a group charged to make summer and fall plans.

Team 2020 surveyed MIT departments on its proposals, including potential teaching sce-

narios for the fall semester. Waitz wrote that administrators have collected faculty input through virtual meetings, surveys, and the Academic Policy and Regulations

# Outside engagements faculty committee holds May forum to discuss progress, address community feedback and questions

*Specialized individuals and organizations tools will evaluate engagements using 'red lines' and 'yellow areas'*

**By Wenbo Wu**
NEWS EDITOR

Professor Rick Danheiser, chair of faculty, hosted a public forum May 21 to discuss the progress of the Ad Hoc Faculty Committee on Guidelines for Outside Engagements. An interim report will be released mid-June to allow time for open feedback before the report is finalized mid-July. The forum was attended by approximately 350 people.

The committee, chaired by Professor Tavneet Suri, was created October 2019 in response to staff and student reaction to MIT's acceptance of donations from Jeffrey Epstein. The committee's goal is to define "values and principles, consistent with MIT's mission, to guide the assessment of outside engagements," according to its charge.

Suri presented core values for outside engagements at the forum. According to the presentation slides, the core values include

transparency; being worthy of a good reputation; honesty and integrity; respect for community members and human rights; "promoting diversity, inclusion and equity"; "pursuing and advancing knowledge with scientific integrity"; "educat[ing] and foster[ing] the advancement" of all community members; excellence; working toward a "better world" through engagements, teaching, and research; and "academic freedom and autonomy."

Suri said that the committee has developed two tools to determine whether an outside engagement upholds these core values. One tool will deal with engagements with individuals while the other will deal with organizations. Each tool will use two sets of guidelines: "red lines" and "yellow areas."

According to the slides, engagements that violate red line principles cannot proceed. Yellow areas are less particular guidelines that, if violated, will result in the engagement

going to deliberation in a standing committee. Engagements that fail red lines may be appealed for discussion in the standing committee.

MIT will then receive a "green light" to engage with an individual or organization after it either passes both the red line and yellow area tests or receives the approval of the standing committee.

The slides wrote that the individuals tool's red lines include viola-

## IN SHORT

**Virtual commencement** will take place noon EDT May 29.

Students who do not **indicate a need** to remain in on-campus housing must depart by May 31.

**Registration for summer classes** opens June 1.

**Emergency summer housing** will be provided until Aug. 8.

Interested in joining *The Tech*? Email join@tech.mit.edu.

Send news and tips to *news@tech.mit.edu.*

## IS&T makes Microsoft Teams available for MIT community

Microsoft Teams is now free to all MIT students, faculty, staff, and affiliates, Information Systems & Technology (IS&T) announced in an email forwarded to *The Tech* May 20.

Microsoft Teams is a collaboration platform that supports text and audio chat, video meetings, and file and calendar sharing. Members of the MIT community can access Microsoft Teams through MIT's subscription to Microsoft Office 365.

Olujimi Brown '99, IS&T director of platform engagement,

wrote in the email that IS&T is making Microsoft Teams available to "help mitigate the impacts of COVID-19 and best support MIT community members as they engage in activities remotely."

Due to the COVID-19 pandemic, IS&T made Zoom and Slack Enterprise Grid free to the MIT community March 13 and March 17 respectively. IS&T also updated WebEx to enable automatic transcription of recordings March 24.

*—Kerri Lu*

# JudBoard to finalize its bylaws due to concerns raised about the Class of 2023's council elections

*Rulings made after 2015 are not affected from JudBoard's completion of its bylaws*

**By Kristina Chen**
EDITOR IN CHIEF

The Undergraduate Association (UA) Judicial Review Board

(JudBoard) will finalize its bylaws "to adhere to the UA Constitution," JudBoard member Roy Kwon '21

**ASIAN PACIFIC AMERICAN HERITAGE MONTH**

How COVID-19 has exacerbated racism toward Asian Americans. **OPINION, p. 5**

**GEHRKE LAB**

Research in the age of coronavirus. **SCIENCE, p. 8**

**SPELLING**

Starting a petition to spell "quarantine" as "qarantine." **CAMPUS LIFE, p. 7**

**EQUALI-TEA TIME**

What it means to be transgender. **CAMPUS LIFE, p. 6**

**COMING OF AGE**

A small-town story with a big heart. **ARTS, p. 12**

# Hoping for sun on a virtual graduation

**By Sarah Weidman**

*STAFF METEOROLOGIST*

Even though we all spend most of our time inside nowadays, the weather outside still has an impact on our lives. I'm sure many of our graduates would love to be able to take a nice walk in the summer sun after a virtual graduation ceremony, wherever they may be in the country or the world.

For those of you in the western half of the country, you may be in luck. The summer climate outlook recently released by NOAA projects a drier than average summer for most of the western US, and today looks to be no exception. Likely you will see some sun outside during and after your virtual graduation ceremony. The East Coast does not seem to be as lucky. Scattered rain and thunderstorms are likely all along the coast and over much of the eastern third of the country, so either bring an umbrella on your walk, or try to walk very quickly. Wherever you are in the Northern Hemisphere, you can surely enjoy the warmth, since all across the country we are finally fully in the heat of summer, a stark contrast from the cold Boston winds from the last time we were all on campus together.

Thank you to all the members of the Class of 2020 who wrote for the weather column over the past few years! Your contributions have always been a joy to read. And congratulations to all the graduates this year; we all wish we could be together to celebrate with you in the Cambridge summer sun.

**Situation for Noon Eastern Time, Friday, May 29, 2020**

### Extended Forecast

**Today**: Partly sunny with a chance of showers. High around 79°F (26°C). South wind around 10-14 mph.
**Tonight**: Chance of showers. Low around 65°F (18°C). South wind around 10-14 mph.
**Tomorrow**: Mostly cloudy with chance of showers and thunderstorms. High around 79°F (26°C) and low around 61°F (16°C). Southwest wind around 10-14 mph.
**Sunday**: Mostly sunny. High around 69°F (21°C) and low around 52°F (11°C).
**Monday**: Mostly sunny. High around 63°F (17°C).

| Weather Systems | Weather Fronts | Precipitation Symbols | | | Other Symbols |
|---|---|---|---|---|---|
| | | | Snow | Rain | |
| H High Pressure | — — — Trough | Showers | ✳ | ▽ | ≡ Fog |
| L Low Pressure | ▲▲▲ Warm Front | Light | ✳ | • | 𝒦 Thunderstorm |
| | ▲▲▲ Cold Front | Moderate | ✳✳ | •• | ∞ Haze |
| ⸓ Hurricane | ▲▲ Stationary Front | Heavy | ✳✳✳ | ∴ | Compiled by MIT Meteorology Staff and *The Tech* |

# Research Ramp-Up Lightning Committee launches building access pilot for lab return

room, and efficiency units can return immediately after completing an online form. Graduate Resident Advisors may also coordinate with their Heads of House and Associate Dean for Residential Education Don Camelio to discuss returns.

2. Students in shared apartments may return to residences June 15 and must also complete the online form.

3. Students in dormitory-style housing with shared floor kitchens and bathrooms may return at a date expected to be announced after stage two is launched.

Upon return, graduate students are expected to self-quarantine for up to 14 days or take two CO-VID-19 tests, one upon arrival and the other one week later. Students must remain quarantined until a second negative test is confirmed. Students who live in higher-density housing may be required to find alternative on-campus housing.

Returning students must also follow all COVID-19 emergency housing policies, including maintaining physical distancing practices and wearing face coverings.

Graduate students who are eligible to register for summer or fall 2020 and remain in housing beyond July 31 due to renewed housing licenses or on-campus housing assignment for the upcoming academic year may return to campus.

Those who fail to meet the minimum criteria to return can request an exemption to return through an online form.

The email also wrote that the Research Ramp-Up Lightning Committee has launched its building access pilot May 18 for Buildings 68, 76, and E17 to gradually increase the number of people allowed to return to lab research. Participation in the pilot is voluntary.

Zuber wrote in a letter to the MIT community May 15 that returning researchers are expected to practice physical distancing, wash hands frequently, and wear face coverings. The committee hopes to learn "what is needed to implement a single-point-of-entry protocol for buildings as part of the phased ramp-up of campus," Zuber wrote.

# Departments 'widely reject' proposed trimester system

Team led by Faculty Chair Rick Danheiser.

Many departments responded that a fully remote fall semester is "doable but less than ideal," according to the presentation.

In response to a proposal to split the semester into two sessions, departments gave "mixed responses on their ability to condense the hands-on portions of classes into half the term."

Departments "widely rejected" the trimester proposal due to concerns about "teaching load," "condensing course materials into shorter terms," "moving/lease concerns for students," and "impacts on IAP and summer activities."

The presentation discusses several strategies for socially-distanced learning on campus, including holding lectures in large event spaces, outdoors, or in tents; holding smaller lab or recitation sections; allowing students to remotely analyze data for experiments performed by teaching staff; sending lab kits to students; and moving lab classes to the spring term.

If only a portion of the student body is on campus, departments could offer "different classes for remote and in-person students with more emphasis on individual coaching and guest speakers for remote students." Remote and in-person students could also be subject to different grading policies.

According to the presentation, departments may need funding to recruit remote guest speakers, mail lab equipment to students, offer financial and visa support for international students, provide more staffed hours in labs and machine shops, hire TAs for smaller recitations, and offer remote RAships or tuition support for incoming graduate students.

Departments expressed a "strong interest" in improved video equipment, editing capabilities, and video capture in classrooms. Departments also expressed interest in faculty training for online instruction, a centralized system of virtual lounges, and a forum for cross-departmental collaboration.

In response to the teaching scenarios survey, the biological engineering department proposed mailing students reusable lab kits containing electronic components. The department is considering using online simulations and emphasizing "computational work, including software development for instrument control and machine learning algorithms for image segmentation and analysis." Classes may also use the remote cloud labs Strateos and Emerald Cloud Lab to perform wet lab experiments.

The EECS department is considering remote co-teaching with faculty at other universities for certain classes, including 6.875 (Cryptography and Cryptanalysis). EECS also wrote that large classes would benefit from a MIT-wide site license to Gradescope, a grading workflow software.

D-Lab suggested involving students in global development projects related to COVID-19. Similarly, the global languages section wrote that its classes could offer "global, diverse, multilingual perspectives on the pandemic and its social/cultural impacts."

The chemical engineering department is considering using the BioMakerspace to "offer unique seminar series or courses." The department also suggested that local MIT Clubs can "catalyze connections between students in remote locations."

Team 2020 has calculated the "COVID-adjusted capacity" of campus learning spaces based on social distancing guidelines and room layouts, according to a May 13 memo. Additionally, the team has divided the campus into sectors for different departments to "minimize student and instructor movement across campus and avoid crowding in entrances."

Department responses to the teaching scenarios survey can be found on a spreadsheet. More detailed departmental teaching plans can be found in a Google Drive folder created by Team 2020.

More information about Team 2020 can be found at covidteam2020.mit.edu. Members of the MIT community can submit comments through an online form.

# Kwon: the UA constitution 'does not give' UA council power to check JudBoard bylaws

wrote in an email to *The Tech*. JudBoard oversees the UA Election Commission and is responsible for interpreting the constitution and other UA documents in the event of dispute between UA bodies.

A complaint filed May 15 on behalf of the UA Council by UA President Danielle Geathers '22, forwarded to *The Tech*, prompted the decision. The complaint called JudBoard to cease all activity and finalize its previously incomplete bylaws by May 29. In a ruling based on this complaint emailed to *The Tech*, JudBoard found "that neither the cessation of activity nor imposition of deadlines have a constitutional basis."

Geathers wrote in her complaint that it was motivated by inquiries following an appeal of a JudBoard ruling surrounding the Spring 2020 election cycle.

Geathers wrote in an email to *The Tech* that, in preparation for this appeal, she reviewed the UA Constitution and found mention of JudBoard bylaws. She then contacted members of JudBoard, "who all reported" that the bylaws "did not exist."

The bylaws were drafted in 2015 in a document called "Operating Procedures." JudBoard's ruling states that this draft does not follow the UA Constitution because it "lacks both the correct name and finalization."

Kwon wrote that "the UA Constitution does not give the UA Council the power to check the Bylaws," and that JudBoard is currently discussing the process of rewriting the bylaws with the council. Additionally, JudBoard ruled that from interpretation of the constitution and because it is most familiar with its own operations, JudBoard will be responsible for writing its own bylaws.

Kwon added that the bylaws are "not integral to the responsibilities and duties" of JudBoard, written in article II section C of the UA Constitution.

The bylaws draft mentions term limits for JudBoard members, tracking of cases and complaints, "metrics for case acceptance," decision-making on cases "if consensus cannot be reached," and checks on the power of JudBoard. The constitution additionally states that "the board shall convene according to the procedures described in the Bylaws of the Judicial Review board."

JudBoard's decision to finalize its bylaws will not affect its rulings in cases since 2015, including the most recent Spring 2020 elections case.

The Spring 2020 class council election for the Class of 2023 attracted controversy for its use of joint tickets for president and vice president, as well as concerns about conflict of interest with the Election Commission.

JudBoard ruled that the Election Commission "conducted the election process in a fair manner." In particular, JudBoard found "no instances of conflict of interest" because the votes were "counted by an entirely automated process" on MIT Engage.

Furthermore, JudBoard ruled that while joint tickets are new to UA elections, the election code does not require separate tickets and the election's write-in option made it possible for voters to select a mixed pair of candidates.

# Desimone: committee is 'forward-looking' and did not consider prior donors

tions of U.S. national security; "flagrant violations of political, civil, or human rights"; "restricting the academic freedom or autonomy" of the MIT community; committing a felony "without mitigating circumstances"; and intent to "use MIT to promote dogma or a political agenda." The individuals tool's yellow areas address Institute core values, MIT's reputation, willingness of MIT representatives to be transparent about the engagement, and correspondence with MIT's mission.

The organizations tool is more complex because it applies to both the engagement itself and the "institutional partner," Suri said.

The slides wrote that an institutional partner represents "the broader leadership of the organization." If the organization is a country, the institutional partner "is not necessarily the government as a whole but the specific ministry/minister or department" that MIT is engaging with.

The red lines and yellow area guidelines are not distinguished by the "importance of issues" but by "how easy or hard it is to draw bright lines," the slides wrote. Additionally, the slides wrote that the committee recommends "precedents and case law" be developed "through [an] archive of tools and corresponding decisions."

Suri then led a Q&A, joined by faculty committee members Robert Desimone, Amy Glasmeier, Daniel Hastings PhD '80, and Daron Acemoglu.

When asked about how a violation of U.S. national security would be defined, Desimone said that precedents matter and the process committee will evaluate the engagement and define a case law.

When asked about the consideration of mitigating circumstances for a felony, Suri said the issue will go to the standing committee for deliberation. Glasmeier added that this question will be addressed with greater precision as time goes on.

Hastings said that mitigating circumstances are considered be-cause someone may have changed in a "fundamental way," or what constitutes a crime in one country may differ from in the U.S.

When asked about how MIT will evaluate engagements involving team travel to countries that limit women's rights, Acemoglu said that the institutional partner definition must be used "judiciously" to protect both the MIT community and institutional partner team members.

When asked whether the monetary amount of an engagement would affect decisions, Desimone said that it was "widely felt" that MIT should not have different principles for larger sums of money.

Suri said that the Ad Hoc Faculty Committee on Guidelines for Outside Engagements is a "principles committee," distinct from a "process committee" like the Ad Hoc Committee to Review MIT Gift Processes.

Suri said that normally, one goes from defining principles to implementing processes, but due to timing, the principles and pro-cess committees had to be formed simultaneously. However, the overlap in members on the committees would allow a "smooth transition" from principles to processes, Suri said.

When asked whether previous donations will be reassessed under the new guidelines, Desimone said the principles committee is "forward-looking" and did not consider previous donors, though the process committee could evaluate donations retroactively.

When asked about the transparency behind standing committee deliberations, Desimone said that the principles would be transparent but there was no determination as to whether or not the deliberations' outcomes would be published.

Desimone said that the committee would decide whether to accept anonymous gifts based on whether it would be comfortable publicly defending the gift if it were not anonymous.

When asked about MIT community participation in deliberations, Glasmeier said that the process committee will formulate practices that allow avenues of communication between the MIT community and the standing committee.

Professor Yossi Sheffi PhD '78 raised concerns that the engagement approval process might take so long that potential deals could be lost by the time a decision is made.

Desimone responded that the committee hopes that with clear case law, the majority of cases can be resolved quickly. Hastings added that the committee can re-evaluate if the process is too slow. The committee has studied test cases and has a "pretty good idea" of how much information is required to reach a decision, Glasmeier said.

The committee gathered community feedback in the fall from emails, 12 sets of office hours, 15 campus conversations, and 17 white papers, Suri said.

Individuals with additional feedback can email Suri at tavneet@mit.edu.

*Áron Ricardo Perez-Lopez contributed reporting.*

# MIT releases preliminary results for Quality of Life Survey

### *46% of undergraduate, 36% of graduate, 41% of faculty respondents indicate their workload is 'too heavy'*

**By Kerri Lu**
*NEWS EDITOR*

MIT has released the preliminary results of the quadrennial Council on Work and Family Quality of Life Survey.

The survey had a 50% response rate, including 13,026 faculty, staff, postdoctoral researchers, and students. The response rate was 43% for undergraduate students, 38% for graduate students, and 60% for faculty.

Overall, 87% of respondents indicated that they are "very satisfied" or "somewhat satisfied" with their role at MIT. The percentage of student respondents who indicated they are "very satisfied" decreased from 52% to 42% between 2017 and 2020.

85% of student, 87% of faculty, and 84% of staff respondents indicat-ed that their primary unit or major is a good fit for them.

49% of student respondents indicated their student life experience was "excellent" or "very good," down from 56% in 2017 and 59% in 2013. 71% of student respondents indicated their academic experience was "excellent" or "very good," a decrease from 76% in 2017 and 78% in 2013.

In addition, 46% of undergraduate, 36% of graduate, and 41% of faculty respondents indicated that their academic or research workload was "too heavy."

Regarding mental well-being, 65% of undergraduate, 60% of graduate, 56% of faculty, and 35% of staff respondents indicated that they "often" or "very often" felt overwhelmed by all they had to do. 33% of student, 24% of faculty, and 19% of staff respondents also indicated that they "often" or "very often" felt isolated.

Furthermore, 47% of student respondents agreed that MIT's academic environment "negatively impacts" their "mental and emotional well-being," up from 39% in 2017. Additionally, 71% of student respondents agreed that the academic environment "negatively impacts the mental and emotional well-being" of students they know, up from 59% in 2017.

Student respondents indicated that their top sources of stress were "balancing multiple commitments" (70%), "expectation to perform as well as my peers" (58%), and "concerns about life after MIT" (50%). Faculty respondents indicated that their top sources of stress were "lack of time to think and reflect" (57%), "scholarly productivity" (56%), and "securing funding for research" (54%).

71% of student respondents described their overall physical health as "excellent" or "good," compared to 55% who described their mental health as such. When asked how many days in the past week they got enough sleep to feel rested, 20% of student and 32% of faculty and staff respondents indicated fewer than three days.

Of the faculty and staff respondents, 62% indicated that they "have a voice in the decision-making that affects the direction" of their unit. 70% indicated their department or unit's procedures are "fair and equitable."

When asked whether they would "feel comfortable raising ethical concerns through of-ficial channels at MIT," 66% of faculty respondents "somewhat or strongly agreed" compared to 62% of staff and 55% of student respondents. Additionally, 66% of faculty respondents agreed that "MIT would take reports of unethical conduct seriously," compared to 57% of staff and 61% of student respondents.

On average, both undergraduate and graduate students rated MIT's environment as more "stressful" than "calm," and more "harmful" than "beneficial" to mental health. Both undergraduate and graduate student respondents rated MIT's environment as highly "embracing of diversity," "friendly," "collaborative," and "safe." Graduate respondents rated MIT's environment as more competitive than undergraduate respondents did.

# Preliminary results of 2020 Housing Experience and Off Campus student surveys released by DSL at faculty meeting

### *60% of surveyed off-campus undergraduates hope to return to residence halls 'when it is safely permitted'*

**By Edwin Song**
*ASSOCIATE NEWS EDITOR*

Vice President and Dean for Student Life Suzy Nelson presented preliminary results from the April-May 2020 Housing Experience Survey and the May 2020 Off Campus Survey at the faculty meeting May 13.

The Housing Experience Survey, sent to students living in on-campus emergency housing April 25, had a 54% response rate for undergraduates and a 42% response rate for graduate students.

Students were asked for their opinions on current public health policies where "all common areas are closed," visitors are banned "with few exceptions," "residents must adhere strictly to social distancing guidelines," and "residents must follow en-hanced personal hygiene practices" including the use of masks.

On each policy, 64%-80% of respondents indicated that the policy was "fine as it is now," with the rest indicating that the policy should be relaxed or strengthened. Undergraduates were slightly more likely than graduate students to request that policies be relaxed and slightly less likely to prefer stronger policies.

Over 75% of respondents indicated that it is "easy" or "extremely easy" to practice social distancing in the building they currently live in.

The Housing Experience Survey also found that 56% of respondents described their "overall mental and emotional health" as excellent or good. However, 60% of all respondents indicated that COVID-19 has "worsened their mental health and wellbeing" while only nine percent indicated an improvement.

The Off Campus Survey, sent to students living off campus May 3, had a 59% response rate for undergraduates and a 56% response rate for graduate students. The survey found that over half of all MIT students are currently living in Massachusetts.

According to the survey, 60% of undergraduate respondents and 18% of graduate respondents "hope to live in an MIT residence hall when it is safely permitted." However, 28% of undergraduate respondents and 26% of graduate respondents "would probably stay" where they are now "if MIT has online instruction and reduced on-campus operations."

Only 26% of on-campus and 24% of off-campus undergraduate respondents "agree strongly" that they "feel like part of the community at MIT," compared to 41% of respondents in the 2019 Undergraduate Enrolled Student Survey. Only 17% of on-campus and 13% of off-campus graduate respondents gave the same response, compared to 30% of respondents in the 2019 Graduate Enrolled Student Survey.

In a statement emailed to *The Tech*, Nelson wrote that MIT's "housing policies are informed by current medical and public health guidance on preventing the spread of COVID-19." However, the Division of Student Life (DSL) has "appreciated on-campus residents' input" in evaluating "the policies' effectiveness."

Nelson wrote that while fall housing policies are still uncertain, it is "likely" that "students will find requirements for physical distancing, face coverings in public areas, and restrictions on events and use of common space to be in effect."

Additionally, Nelson wrote that respondents to the Housing Experience Survey have "identified barriers to following new policies and shared ideas for ways to improve." For example, some students expressed "concern about the ability for desk workers to remain physically distant from residents and delivery workers." As a result, DSL is considering installing clear shields at front desks.

Nelson wrote that in addition to virtualizing student support resources, DSL is also considering establishing a "virtual wellbeing center where students can access resources easily, quickly get answers to their questions, and be directed to the right office to help support them."

*Jessica Shi contributed reporting.*

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## GUEST COLUMN

# War criminals fit right in at MIT

*McRaven as commencement speaker continues decades-long military connection*

**By Patrick Moran**

As if to underscore the current dystopian moment, this year's graduating class will receive their degrees remotely with parting words from a professional assassin, four-star Navy admiral William McRaven. The announcement of McRaven as commencement speaker was praised by university leaders. President Reif, who has worked with McRaven through the Council on Foreign Relations, noted his "integrity, intellectual curiosity, decency, humility, and self-discipline," and assured that he will "fit right in at MIT." MIT News mentioned his "passionate advocacy for freedom of the press" and his role in several high-profile special operations missions, which have contributed to McRaven's mythic reputation.

An exception to this admiration came from UA President Mahi Elango, who expressed concern over MIT's longstanding ties to the military-industrial complex and McRaven's prominent role in it. Indeed, McRaven has functioned as a commander and architect of the so-called War on Terror, whose central features include kidnapping, torture, and extrajudicial assassination. McRaven symbolizes this expansive, endless war that blurs distinctions between warzones and sovereign nations, between enemy combatants and civilians, and devastates families and nations. For MIT to give McRaven an honorary speaking opportunity is to whitewash his crimes and the unjust wars he represents.

A Navy SEAL by training, McRaven's ascension — as part of the U.S. Joint Special Operations Command (JSOC), an ultra-elite special operations unit — coincided with the neoconservative shift in U.S. foreign policy under the George W. Bush administration. Following the September 11 attacks, capitalizing on national anxiety and pro-war hysteria, administration officials like Vice President Dick Cheney and Secretary of Defense Donald Rumsfeld sought to forcefully reassert U.S. hegemony and increase the president's ability to wage war with impunity, positioning U.S. special operations forces at the vanguard. Under the new regime, JSOC effectively served as the paramilitary arm of the White House, largely unaccountable to Congress and the traditional Pentagon hierarchy.

Far from being a pawn in Cheney and Rumsfeld's game, McRaven helped to construct the military strategy and ideological lens of the War on Terror, a framework that has gained bipartisan acceptance and persists today. (In fact, McRaven's master's thesis from the Naval Postgraduate School, "The Theory of Special Operations," would later become the standard textbook on the topic.) Key features include the use of special operations forces and drones to capture or kill targets. Further, the War's expansive definition of "the enemy" means that individuals are targeted simply for suspicious behavior or beliefs, amounting to the prosecution of "thoughtcrime" without due process; even U.S. citizens are not immune.

In an attempt to pursue an amorphous and decentralized enemy across the globe, the War on Terror has now expanded far beyond Afghanistan and Iraq to nearly 80 countries, spurred on by figures like McRaven. In the words of Rumsfeld, the entire world is the battlespace. The full extent of civilian casualties is unknown due to a White House policy of classifying drone strike victims as Enemies Killed In Action (EKIA), unless proven otherwise. In fact, an analysis of leaked internal documents found that, in one five-month campaign in 2012, nearly 90% of those killed by drone strikes were not the intended target.

Throughout his career, McRaven has been a vocal and effective advocate for increasing the reach and scope of U.S. special operations. Former Army Ranger, JSOC member, and Middle East analyst Andrew Exum credits McRaven, along with Generals Stanley McChrystal and Michael Flynn, as a key figure who fundamentally shaped the evolution of U.S. special operations since 2001. Under Bush, McRaven served as director of Strategic Planning in the National Security Council's (NSC) Office of Combating Terrorism and was the principal author of the administration's "National Strategy for Combating Terrorism," a landmark policy document in the War on Terror. In addition to promoting a propagandistic narrative of Afghan and Iraqi liberation and the spread of democracy by force, the report called for the "application of all instruments of national power and influence to kill or capture the terrorist," pointing to recent domestic surveillance "successes" such as the Patriot Act, and calling for "significantly expanding Special Operations Forces... and initiating the largest rearrangement of its global force posture since the end of World War II." Additionally, as the principal JSOC member of the NSC, McRaven vetted and assembled the Bush administration's kill lists of so-called "High Value Targets." According to investigative journalist Jeremy Scahill, McRaven was "one of the key players in militarizing U.S. counterterror policy and building up the infrastructure for the creation of kill lists."

> ## McRaven has been a vocal and effective advocate for increasing the reach and scope of U.S. special operations.

> ## Under McRaven's leadership, JSOC not only routinely detained and tortured, but also killed innocent civilians.

Following his time in the Bush White House, McRaven commanded Task Force 121, the JSOC unit assigned to Iraq and Afghanistan. During this time, Task Force 121 engaged in regular "kill/capture" operations and torture. For example, torture at Camp NAMA in Baghdad, which included beatings, electric shocks, sleep deprivation, and confinement in dog kennels, was widely accepted practice, as evidenced by the camp's motto "No Blood, No Foul." According to Air Force interrogator Steven Kleinman, who visited the prison in 2003, the interrogation tactics used there were "direct violations of the Geneva Conventions and could constitute a war crime." According to a 2004 Red Cross report detailing the mass detention and abuse of Iraqis at the time, an estimated 70–90% of detainees were arrested in error.

Following the celebrated 2009 Maersk Al-abama hostage rescue, McRaven's star rose, and he eventually became a trusted advisor in the Obama White House. There he reportedly served as a bridge between the battlefield and the halls of power, as the administration codified and streamlined Bush's policy of assassination. McRaven worked closely with General McChrystal, commander of U.S. forces in Afghanistan, to design the administration's counter-insurgency policy in Afghanistan, and successfully pushed for the expansion of U.S. drone and special force operations into Yemen and Pakistan.

In 2008, McRaven was appointed JSOC commander. Under his leadership, JSOC not only routinely detained and tortured, but also killed innocent civilians. In December 2009, McRaven successfully pushed top national security officials for rapid authorization of a strike on suspected Al Qaeda targets in al-Majalah, Yemen. Missing the intended targets, the cruise missiles hit one of the poorest tribes in southern Yemen, killing 55 people, including 14 women and 21 children. Upon learning the details, Pentagon general counsel Jeh Johnson reportedly remarked, "If I were Catholic, I'd have to go to confession."

Several months later, JSOC conducted a night raid on a house in Gardez, an Afghan village. The inhabitants, gathered to celebrate the naming of a newborn child, were in fact Taliban opponents and had even collaborated with NATO forces in the past. Nevertheless, claiming they were Taliban forces, JSOC soldiers slaughtered seven, including two pregnant women. Additionally, the survivors were shackled, hooded, and suffered "cruel and inhuman" treatment in a JSOC prison, according to a UN report. Despite a cover-up attempt, which reportedly included JSOC soldiers using knives to dig bullets from the bodies of the female victims and NATO declaring their deaths the result of an honor killing committed by the family, the truth eventually surfaced and McRaven was forced to visit Gardez and offer a ritually slaughtered goat in reparations.

> ## MIT has not been shy about giving war criminals a warm reception on campus.

At a time when MIT is reevaluating problematic engagements, inviting a commencement speaker with a human rights record as deplorable as McRaven's may seem inconsistent with recent moralizing about MIT values. However, this would neglect the fact that obeisance to the military is part of the fabric of a university that was largely built and shaped by World War II and Cold War defense contracts, earning it the moniker "The Pentagon on the Charles." MIT has not been shy about giving war criminals a warm reception on campus: recent distinguished guests include Mohammad bin Salman and Henry Kissinger. At a university that invites trusted partners such as Lockheed Martin and Raytheon to Career Fair in order to direct students deeper into the U.S. war machine, it is perhaps fitting that MIT graduates will be sent off into the world with warm anecdotes and hardy life lessons from SEAL training. Indeed, Admiral McRaven will fit right in.

*Patrick Moran is a graduate student at MIT and a member of MIT Students Against War.*

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## OPINION POLICY

## TO REACH US

## GUEST COLUMN

# Anti-Asian racism: the neglected strain of COVID-19

*Like a virus, xenophobia adapts, new strains for new times, as noxious ever*

**By MIT Asian American Initiative**

**Yu Jing Chen:** A couple of months ago, right as coronavirus was beginning, I was invited to watch the Boston Ballet for free. Normally, I would never have even thought twice about going. The issue?

Just the night before, I had been scrolling through Facebook and had seen a video of a group of people taunting an elderly Asian man to the point where he was in tears. Hate spewed from the lips of the offenders as they physically assaulted the man: "I hate Asians."

The elderly man had simply been out collecting recyclables, likely to make any extra money to support his family. On this particular day, he was not just robbed of his day's work of recycling; he was robbed of his dignity. Flashbacks to my childhood arose, of my grandparents bringing home tables and other knick knacks that they'd collected from the sides of roads and alleys simply because we didn't have the money. That elderly man could very well have been my grandfather. I was shaken to the core.

> **To be Asian American is an interesting thing — a juxtaposed existence.**

What was I to do if I, a lone Asian woman taking the T late at night to see the Boston Ballet, were similarly attacked? My childhood had been characterized by unknowing smiles of good-willed people like this man, unaware of the racist words thrown at them. The distinction here? I understand them.

To be Asian American is an interesting thing — a contradictory existence. To be perceived as silent and complacent, yet simultaneously to be hushed when we do speak for our accents and broken English, then assured that we have nothing to be angry about as the "model minority" is an oxymoron in itself. We have never been seen as completely American. It's a startling reality that many who have tried so hard to conform to this "American" mold of white suburbia have come to realize in times like this.

Don't be fooled by the recent influx of Asian faces on television. Don't be fooled by the seeming success of Asians in America. Don't even be fooled by the fact that an Asian American has run for president of the United States. For as long as racism thrives in this country, we will forever be viewed as the "perpetual foreigners."

**Alana Chandler:** Such xenophobia is rooted in American history.

In the late 19th century, the Chinese Exclusion Act barred Chinese people from entering America, after white people insisted that their presence, or rather intrusion, in America leeched the country of good: jobs, cleanliness, and civility. Yet, being half-white and receiving an education in predominantly white institutions since middle school, I have witnessed firsthand how this history has been overlooked a deemed irrelevant, so much so as to be largely erased from the American history curriculum.

Like a virus, xenophobia adapts, new strains for new times, as noxious as ever.

For some Asian Americans, it began with someone in the grocery store telling them they didn't deserve a grocery cart at the risk of physical assault if they did not relinquish the cart. For other Asian Americans, they were told their "kind" were not wanted here, whether it was yelled across the street or uttered by a neighbor in the elevator. Spat on, punched, chased, refused service, greeted at work by smashed windows and hate-fueled graffiti, called slurs left and right, Asian Americans are openly attacked and berated beyond the unassuming comfort of white spaces today.

As the coronavirus epidemic has spread across America, so have the hate crimes. Such incidents include the stabbing of an Asian American family in Texas, a 16-year-old sent to the hospital after being bullied about the coronavirus, and a woman burned through an acid attack while taking out the trash. These are only a handful among thousands of incidents reported since the coronavirus pandemic began.

To the ignorant and fearful, an Asian American with a mask signifies a sickened foreigner spreading the virus with each step they take in a country that does not accept them as their own. How is it that taking your mask off, to escape accusation and attack, is safer than wearing one?

"Go back to where you came from," is a common phrase thrown at Asian Americans, as if disappearing from America would make the virus itself disappear. As Cathy Park Hong said in her New York Times oped, to xenophobes, "We don't have coronavirus. We are coronavirus."

> **As the coronavirus epidemic has spread across America, so have the hate crimes.**

Anti-Asian American racism hasn't been taken seriously, from history to modern day. What harm could there be in making fun of our eyes and our "smelly" food once in a while? Asian Americans are painted with the broad brush of being a "model minority"; what could there be to complain about for a group of obedient, productive, quiet people?

While just a century ago, Asians were seen as inferior, unclean people, today, the "positive" stereotype has replaced such rhetoric. The illusion of preeminent Asian American success and complacency has been used to minimize the struggles that other minorities have experienced — a racial wedge to pit minorities against each other and to silence all. The notion that one racial minority group could "flourish" under the current American system while another "complains" is a tool used to undermine the oppression other minority groups face. Our struggles are also invalidated with the covert yet omnipresent question woven into the cultural tapestry of America: Why should Asian Americans complain when they're "next in line" to being white?

> **Today, the wounds of discrimination have been ripped open for everyone to see.**

Fetishized, emasculated, demoted, harassed, all in the shadows of America's racism, today, the wounds of discrimination have been ripped open for everyone to see. The pandemic has unveiled the callous racism boiling under America's skin, the cookie-cutter comfort of Asian Americans in this country an illusion. What will it take for America to realize this isn't true? Was the mass incarceration of Japanese Americans during WWII not enough? How many more Asian Americans are to be stabbed, harassed, and abused until America opens its eyes?

**MIT AAI:** In response to the rampant Asian American racism facing our country, Former Democratic presidential candidate Andrew Yang said in an opinion piece for the Washington Post,

"The best thing that could happen for Asians would be to get this virus under control so [crimes against Asians aren't] a problem anymore. Then any racism would likely fade…

We Asian Americans need to embrace and show our American-ness in ways we never have before… Show without a shadow of a doubt that we are Americans who will do our part for our country in this time of need. Demonstrate that we are part of the solution."

When even a fellow Asian American encourages the obedience of Asian Americans, it shows how deeply etched this rhetoric is in the American psyche.

Yang's rhetoric is white-pleasing. Perhaps he has been conditioned to please, playing into the system in order to succeed. Yet, once stay-at-home orders are lifted and people are interacting more normally, hate crimes against Asian Americans may very well grow, simply because there are more incidences of interaction for them to grow. The society we will find ourselves within these next couple years, one in which the economy may be devastated and one that may be drastically different in terms of social norms, will need a scapegoat. That scapegoat may very well be Asians.

Asian Americans, as with other Americans, are and have been working to prevent the spread of the virus through every measure, from social distancing in their homes to working on the front lines. We do this, not because we are Asian American, but because this is how community members act in times of crisis, regardless of background.

Why is Americanness something we have to prove? Will handing out masks while wearing red, white and blue truly erase underlying hostility? What about after the virus?

Yang is under no obligation to speak on behalf of the Asian American community just because he is Asian American. But if he chooses to do so, especially as a prominent Asian American figure, one would think he would be more mindful of what he says, particularly in his decision to put the responsibility of addressing racism on Asian Americans rather than condemning the racists themselves. This pattern — where the responsibility of combating oppression is solely placed on the victims of such oppression — is one that has plagued American history. Time and time again, we find ourselves back in the same place, disappointed by yet another news story or headline.

**Chandler**: I recently listened to a video by Rabbi Steve Leder reminding us to put into perspective the difference of an inconvenience versus a problem in these trying times.

> **Curing coronavirus is out of the hands of the general public. But creating a more just America is a problem that we can and must fix.**

Having to eat the same meal every day is an inconvenience. Not being able to spend a semester of college with your friends is an inconvenience. Having to spend a birthday inside is an inconvenience.

Disparities in access to proper health care are problems. The number of people of color disproportionately affected by the coronavirus is a problem. The xenophobic harassments and killings towards Asian Americans are problems.

Curing coronavirus is out of the hands of the general public. But creating a more just America is a problem that we can and must fix.

**Chen:** We may never get another period of time so subject to transformation. As everything has come to a halt and as the inequities of our society have become clear as day, we now have the opportunity to confront them head-on. The first step is to acknowledge that.

This month is Asian Pacific American Heritage Month. In a society that demands our assimilation and silence, we must continue to support each other, and others marginalized, in celebrating and reclaiming our identities and rich cultures. We are Asian American, and we are proud.

*Brought to you by Yu Jing Chen '22 and Alana Chandler '22, members of the MIT Asian American Initiative, a student run organization for Asian American advocacy, allyship, and civic engagement. Contact us at aai-exec@mit.edu or on our Instagram (@mit.aai).*

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## EQUALI-TEA TIME

# Welcome to the table

## A glance at one transgender experience

**By Nathan Liang**

*PUBLISHER*

Equali-tea Time *is a platform for educational discourse surrounding various topics about the LGBTQ+ community. If you would like to contribute a guest post, have a question you'd like answered, or want to send feedback or comments on subjects that have been discussed in the column, please email equalitea@tech.mit.edu.*

*Disclaimer: This first column discusses gender expression from a binary perspective. My story should not be used as a comparison point for all trans experiences. In the future,* Equali-tea Time *will more directly tackle the idea of gender as a spectrum, along with a slew of other ideas relevant to the LGBTQ+ community!*

*Transgender is a term that describes people whose gender identity does not agree with the sex they were assigned at birth. A person's sex is usually defined by biological markers, such as genitalia or chromosome designations, whereas gender identity is a socially understood concept of how people present themselves along the gender spectrum.*

One of the clearest memories I have from when I was younger (maybe five or six years old) is asking my mother this: "Is it possible that I am a boy's spirit trapped inside a girl's body?"

Her response to this was dismissive: "You're just making yourself think that."

I remember feeling crushed. I was confused and at a loss. Was I really making myself think that? Wasn't I taught to follow the beliefs I held in my heart? And why was it that everytime I saw a shooting star in the night sky, I'd close my eyes, hold my hands together, and wish with all my heart to wake up the next day in a boy's body?

*Gender dysphoria is often succinctly described by the saying "I was born in the wrong body." This thought often persists in the minds of transgender people. Being identified as the wrong gender brings anxiety. Seeing ourselves in a body that doesn't match our gender identity may bring us extreme discomfort.*

> **Was I really making myself think that? Wasn't I taught to follow the beliefs I held in my heart?**

I struggled with these feelings into middle school, dreading my first period, hating how my body changed as I went through puberty. I developed crushes on female friends, but I didn't like the label lesbian. I didn't know why, but I just didn't vibe with the term. I couldn't see myself completely identifying with it.

It wouldn't be until the summer before my freshman year of high school that YouTube showed me the answer I had been looking for all these years. Trans men were using the platform to document their transitions and talk about what being transgender meant. It was the first time I really connected with a queer narrative. I finally felt like I had found the words to describe who I really was.

*Generally speaking, there are two types of transition that a trans person can go through in their life: social and physical.*

*The social transition is, well, how one socially becomes their preferred gender. This usually means coming out to close friends and family, adopting the desired pronouns, changing one's name, changing one's wardrobe, and the list goes on and on.*

> **It was the first time I really connected with a queer narrative. I finally felt like I had found the words to describe who I really was.**

When I think back on my coming out experience, I'm always glad to know it ended well. My high school friends and my little sister were really accepting and loving. My mom was confused and hilariously suggested, "Are you sure you don't want to be nonbinary instead?" because she was afraid of the discrimination I may face by going through with such an "extreme" transition from one end of the spectrum to the other. Regardless, she trusted me and supported my decision.

However, the wait leading up to the coming out always makes me think. I was always too scared to come out in high school because I didn't want to be bullied. I waited until after my high school graduation to tell my family because I really believed there was a solid chance I would be disowned and kicked out of the house, despite knowing, deep down inside, that they loved me unconditionally. I was prepared to pack up my things and spend my summer couch surfing at friends' places until I could escape to a new life at MIT.

Knowing I really genuinely thought that... it always makes me a lil sad. It's what compels me now to be a visible example of the trans experience. I want people who are scared to come out to know that unconditional love exists in the world. I was lucky enough to have found it in my family, but it's also important to note that everyone's journey with this will be different. The key is finding a solid support system to help navigate the turbulence of coming out and transitioning. Chosen families also exist for a reason, and I'm always grateful for the one I found at MIT because they understand me on that queer level that my blood-related family just can't.

Along this same vein, I also urge people who aren't trans to work toward a more respectful and accepting world. I don't want trans youth to have to go through what I went through. To have to sit and wait for years, stewing in fear and anxiety and preemptive mourning of relationships that could be lost, just to wait to come out at a moment when they're primed to escape if they have to. I don't want that to be a reality that persists into the future, and changing that takes work from people inside and outside of the community.
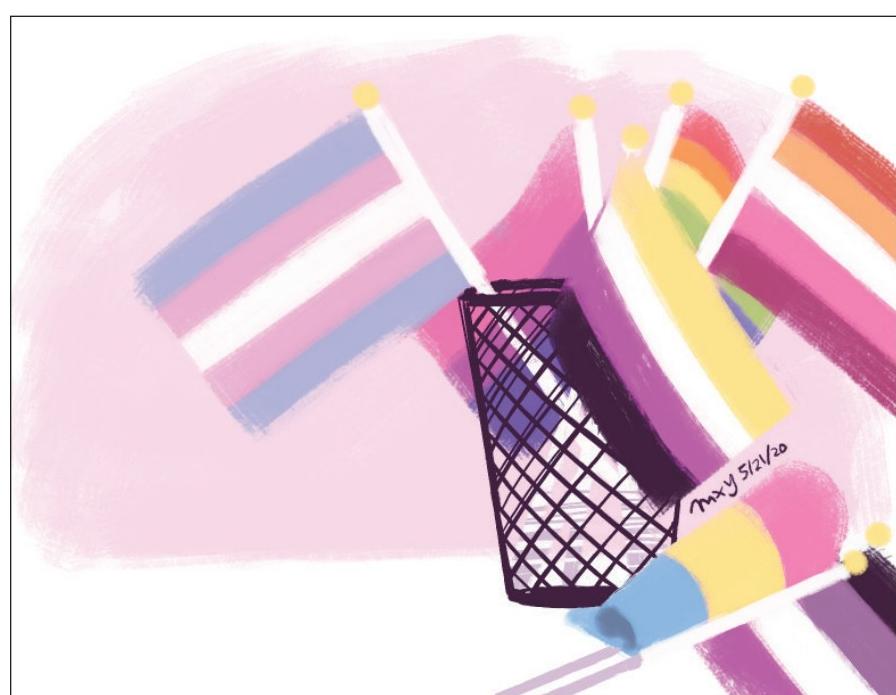


*MAX YU — THE TECH*

**Transgender identity is just one of the many identities** that lie along the LGBTQ+ spectrum.

*Pronouns and names are important to trans people because it is a method of affirming their identity. Especially when trans people are trying to figure out their gender identity or are just beginning to socially transition, having other people affirm them with their preferred pronouns or help them try out new names helps to validate their thoughts and feelings as they explore themselves.*

> **I don't want that to be a reality that persists into the future, and changing that takes work from people inside and outside of the community.**

When I came to MIT, I was that really obnoxious trans frosh that would go, "Hi, my name is Nathan and I use he/him pronouns." It was my first time actually being out in the world as male, but since I was pre-physical transition, I was always conscious of the fact that my feminine voice, my round face, and my curvy body would give away the fact that I wasn't born male. To combat this, I reminded everyone I met that my pronouns were he/him. Looking back, I feel a bit embarrassed at how adamant I was about it, but it's how I felt secure in a place as new and chaotic as MIT.

*The physical transition can look very different depending on the person. The most common first step for a physical transition is starting HRT (hormone replacement therapy), which usually means taking regular doses of testosterone for trans men and regular doses of estrogen for trans women. Trans men and trans women will often also pursue cosmetic surgery to transform their bodies in ways that alleviate their gender dysphoria. Some trans people decide that physically transitioning just isn't for them, which is cool too.*

I started testosterone hormone injections February of last year, right smack at the beginning of my sophomore spring. I was elated to finally start the next step in my transition and the days couldn't pass by quickly enough for me to see the changes I wanted to happen. See, my voice gave me the most dysphoria because I knew it was the one thing that really gave me away as AFAB (assigned female at birth), so when it finally started to drop with the passage of time, the relief was indescribable. Funnily enough, a lot of friends initially asked if I had caught a cold, but I assured them that "No, I was just going through second puberty." This would become an ongoing joke well into my junior fall.

> **I will have removed a weight off my chest (literally and metaphorically), and those scars will mark the end of my transition.**

More recently, I've made plans to undergo top surgery to deal with the thing that started causing me the most dysphoria after my voice dropped: my chest. I'm not gonna lie, I'm dreading the inevitable post-op period of recovery, but the important thing is I will no longer feel trapped in my own body. I will have removed a weight off my chest (literally and metaphorically), and those scars will mark the end of my transition. It's bittersweet to know I'll finally close off this chapter of my life, but I got through it and I made it out the other side a much happier, more complete person than I started.

To all my friends and family who've supported me as I transitioned, thank you. I love you all.

## WENBO'S WALKS

# On being the letter 'Q'

## Life update: still has no idea how spellcheck works

**By Wenbo Wu**
*EDITOR*

Methinks I rested on the kwestion of hao spelchek works for a bit 2 long. So long, in fact, that I have seemingly allowed a column to slip me by. I know I said in my first column that "Wenbo's Walks" would be a biweekly, but as *The Tech* is now only officially publishing new issues monthly during the summer, my column will follow suit.

Remember how I also said last column that I would never "bellyflop into another column with poor English ever again"? Yeah, me neither. It's just been too long since I wrote that. Precisely a month ago, in fact. It'd just really be a shame if I didn't *end* this column with proper English etiquette either....

Contrary to what one may believe, I plead the case that I've actually upheld my promise from the last column, since most of the strings in that first "sentence" would scarcely kwalify as English at all!

I will pause for a brief moment here to comment on the curious absence of the letters "X," "Z," "J," and "Q" from the previous paragraphs. These letters are coincidentally the rarest letters of the English alphabet.

I appreciate them tremendously for hanging in there, even when it seems like the English language itself (or the writer of this column) is actively trying to eksclude them.

I relate most to "Q." Being in quarantine for so long has often caused me to get all up in my head again. Yet, I continue to remind myself that I, like "Q," can be *strong* and *independently functioning* even without "U" beside me. Hold my (figurative) beer while I start a petition for "quarantine" to be spelled "qarantine" instead.

I also relate to "Q" for other reasons that I shall, in a style captured most elegantly by math textbook authors, leave as an exercise for the reader.

Okay. Ahem. I'll stop with the Instagram poet-level #deep misspellings and get on with the column.

As it happens to be Commencement, allow me to first extend my congratulations to all the graduating students. You have worked incredibly hard to get here, and although I know that this was not the ceremony you imagined or deserved, I hope that you will reflect fondly upon your time at MIT.

One thing I've learned while writing this column is that I'm not great at sticking with its premise. Usually the walk itself is sidelined in favor of angsty commentary. Actually, "angsty" isn't the proper way to portray my column. I'd say the commentary tends to be more... "socioeconomic."

Wow, look at me go with those big boy words.

Did you know I once had an AP U.S. History teacher who swore if I wrote "socioeconomic" on the AP essays I would be guaranteed a 5? Anyone wanna take a wild stab at what word appeared in my essays that year?

In short, my column may be purgatory's (I hesitate to use another word, for this is a family-friendly column) equivalent to those kitchen-friendly "eat, pray, love" signs obtainable at any local Walmart.

> Yet, I continue to remind myself that I, like "Q," can be *strong* and *independently functioning* even without "U" beside me.

You know what? Let's call this week "the week of self-improvement."

In order to become better at writing my *own* column, I shall venture into somewhat more experimental territory. I'll probably return to my normal format at some point before the next article, but for now, I shall simply enumerate all the things I see and have y'all take a guess as to where I am.

(This is totally not to compensate for the lack of interesting locations I've visited since quarantine started.)

Concrete rises to abyssal lows
Rocky to sandy undertows
Auspicious fowls over raggedy ridges
Murky reflections from skyline bridges

I give up. There's nothing distinctive here, no *defining* features like the Big Ben, Eiffel Tower, or world's largest Taco Bell. At least I upheld my promises of returning to my usually-scheduled programming "before the next article"!

Eh, I'll let you take a guess anyway. Just do your best. I promise this won't be as life-determining as your weekly horoscope and will be graded on a PE/NE/IE basis.

Just kidding. Since I'm feeling especially benevolent today, I'm just going to give everyone a PE upfront for even trying.

Have I just devised a discount, low-tech version of Geoguessr? It has all the features of the classic game, minus the fun. You get what you pay for, I suppose. Capitalism win?

If you guessed "beach," "boardwalk," or anything along those lines, I shall award you an honorable mention. However, we *are* amidst a global pandemic and I'm decidedly not a resident of Florida, which apparently knows better about reopening than all the health officials in the country.

If you guessed "Reston, Virginia," however, you'd be completely correct. You know, the place you hear every so often name-dropped in a country song to make the generic lyrics sound more... personal?

I don't mean to be rude, but "bro country" is the actual worst. If I hear the concepts of a dirt road, pickup truck, ripped jeans, beer, catfish, cornfield, and boots jammed into one song ever again, I will stare passive-aggressively at the radio.

Consider my pacifism as a warning, 98.7 WMZQ. It doesn't help matters that these songs often also have sexist undertones. Yikes. How does *this* stuff get radio airplay when genuinely touching or clever country songwriting doesn't?

To prevent myself from going into a spiraling rant about the popular cash-cow tropes of modern country music, I'll backtrack a bit to the first occurrence of "Reston." It's like... dying in a video game but respawning at the checkpoint.

I should probably also mention that, in true epic gamer fashion, I will respawn and act like nothing has happened. Dare I say I'll "switch sides like a record changer"? Thank you, Taylor Swift.

Reston happens to be the origins of a type of ebolavirus, according to *The Hot Zone*, a nonfiction thriller by Richard Preston. "Reston" and "Preston" rhyme. Coincidence? I think not.

Anyways, I first discovered *The Hot Zone*, oddly enough, at a used book sale in a church basement.

Did my parents monitor what I read as a child? Nope. Did my teachers stop sixth grade me from reading it at school? Absolutely not.

*The Hot Zone* remains, by the way, the most terrifying book I've ever set eyes upon. I can generally tolerate blood, zombies, ghosts, and such, but I'm sorry: viruses are just horrifying, okay?

That's not to say it's not a *good* book, as I'm sure it would be the perfect cup of tea for some of you. I can especially see those who love watching overdramatic TV shows like *Tiger King* or *90 Day Fiancé* enjoying this book.

I distinctly remember the cliffhanger endings for every chapter. These endings were like purgatory's equivalent of a "To be continued..." banner at the end of a *Doctor Who* episode: gripping but infuriating due to a lack of accompaniment by an iconic theme song.

Hmm. I actually find cliffhangers quite intriguing. I remember the *Goosebumps* books I binged as a child had one for almost every volume in the series.

I thought at one point that I was being super original after writing this short story that deliberately ended mid-word. I was almost proud of myself. But then I learned that John Green already did something similar with the fictional author character in *The Fault in Our Stars*. Bravo.

> I promise this won't be as life-determining as your weekly horoscope and will be graded on a PE/NE/IE basis.

For added emphasis, I wrote that story *long* before I learned of the existence of the John Green novel. If I had known, I probably wouldn't have written it at all, since that author character was not particularly nice in the book and I was a highly impressionable child.

Still, it would be a shame if I did that with this column and left the final sentence incomplete so that my readers and I would have to wait for the next issue to finish the narrative. But I would never do



*WENBO WU — THE TECH*
**Look upon thy beautifully empty beaches** during quarantine, Virginia!

SCIENCE SCIENCE SCIENCE SCIENCE **SCIENCE** SCIENCE SCIENCE SCIENCE SCIENCE

## LAB SPOTLIGHT

# Fighting coronavirus through research
*The Gehrke Lab's work on viruses and their involvement in COVID-19*

**By Seung Hyeon Shim**

With millions of patients affected by COVID-19, a novel coronavirus likely transmitted initially by bats, Lee Gehrke, biology professor and faculty at the Institute for Medical Engineering and Science, is investigating potential diagnostic tools and treatments as a response to the world's pandemic crisis.

As a virologist, Gehrke explores the pathogenesis and progression of viruses. Previously, the Gehrke Lab developed rapid diagnostic tools for both the dengue and Zika virus, which are types of flavivirus. Now, the lab has extended its scope of research to discover rapid diagnostic tools for COVID-19, utilizing past pathogenesis techniques for the dengue and Zika viruses.

Although flaviviruses and coronaviruses are from different viral families, they are both positive, single-stranded RNA viruses that can translate proteins directly from their RNA genome. Generally, coronaviruses are more dangerous than flaviviruses because "SARS-CoV-2 [severe acute respiratory syndrome coronavirus 2] virus is transmissible through aerosol droplets, through person-to-person contact, and potentially through contact with contaminated surfaces. Because the world's population had not been exposed previously to the newly emergent SARS-CoV-2 virus, there was no prior immunity to it," said Gehrke.

He also explained that "flaviviruses have a genome that is about 10,000 to 11,000 nucleotide bases while the coronavirus genome is larger, at about 30,000 nucleotide bases. In addition to being larger, the SARS-CoV-2 coronavirus has a more complex replication strategy than the flaviviruses." Rather than synthesizing continuous RNA transcripts, coronaviruses generate small, segmented RNAs that make the viruses' pathogenesis harder to study.

As one of the few labs authorized to conduct research on biosafety level three (BSL-3)

viruses, the Gehrke Lab is studying pathologies of SARS-CoV-2 at the Ragon Institute. Employing virology techniques such as titer determination — analyzing the number of infectious particles present per unit volume — the Gehrke Lab is applying their expertise in flavivirus to study the novel coronavirus.

Similar to studying flavivirus, Gehrke and his lab members are closely mimicking human physiology in their research, as well as using other methods, such as microscopy imaging and cytokine analysis. Through these established research methods, Gehrke is hopeful that they will be able to yield a quicker result.

In addition to other diagnostic techniques — including nucleic acid and PCR methods — the Gehrke Lab has developed a direct viral antigen test, lateral flow chromatography, which "detects the virus itself using antibodies that recognize the viral particles." Believing that this technique has high potential, Gehrke and his lab aim to make it available to the public, including places that do not have a lot of resources and power, so that people can self-diagnose quickly, periodically, and simply.

Because SARS-CoV-2 is a BSL-3 agent, greater challenges arise than when conducting ordinary research. In order to prevent potential inhalation of any infectious materials, Gehrke described safety measures being implemented: "Conducting experimental work at Biosafety Level 3 is challenging because researchers work in a full-body Tyvek suit with several pairs of gloves. The head is protected by a helmet-like covering wherein filtered air is delivered through a battery-powered positive pressure pump." Another challenge is the limited availability of human samples for efficient diagnostic testing. Therefore, Gehrke explained that despite the mass number of people infected, connections between clinics and labs aren't yet well-established to effectively test potential treatments on people.
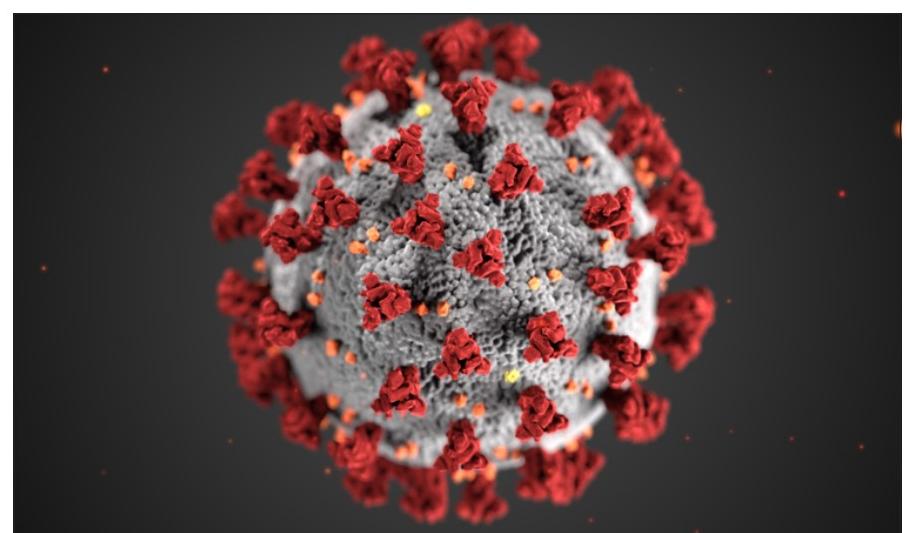

*COURTESY OF CENTERS FOR DISEASE CONTROL AND PREVENTION*
**The Gehrke Lab is working** to develop diagnostic and treatment tools for COVID-19, the novel coronavirus.

On the bright side, Gehrke noted that the family of coronaviruses has been studied for a long time and that while researchers cannot yet "extrapolate from the pathophysiology of 2003 SARS-CoV-1 to describe 2019 SARS-CoV-2," there will be similarities to establish better foundations in their research. Moreover, to cope with the challenges of the current pandemic, the National Institute of Health, government agencies, and various consortiums are putting efforts into supplying resources. Not only are numerous researchers investigating COVID-19, but they are also better collaborating and sharing data to reduce redundancy and increase efficiency.

Countless people have been affected by the COVID-19 outbreak, whether financially, politically, socially, and academically. Fortunately, there are numerous researchers, including Gehrke and his lab members, hoping to make a difference in this time of crisis.


*COURTESY OF THE GEHRKE LAB*
**Lee Gehrke and his lab have previously researched flaviviruses** such as Zika and Dengue viruses.

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# CONGRATULATIONS TO THE TECH'S CLASS OF 2020

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# Congratulations

Solution, page 3
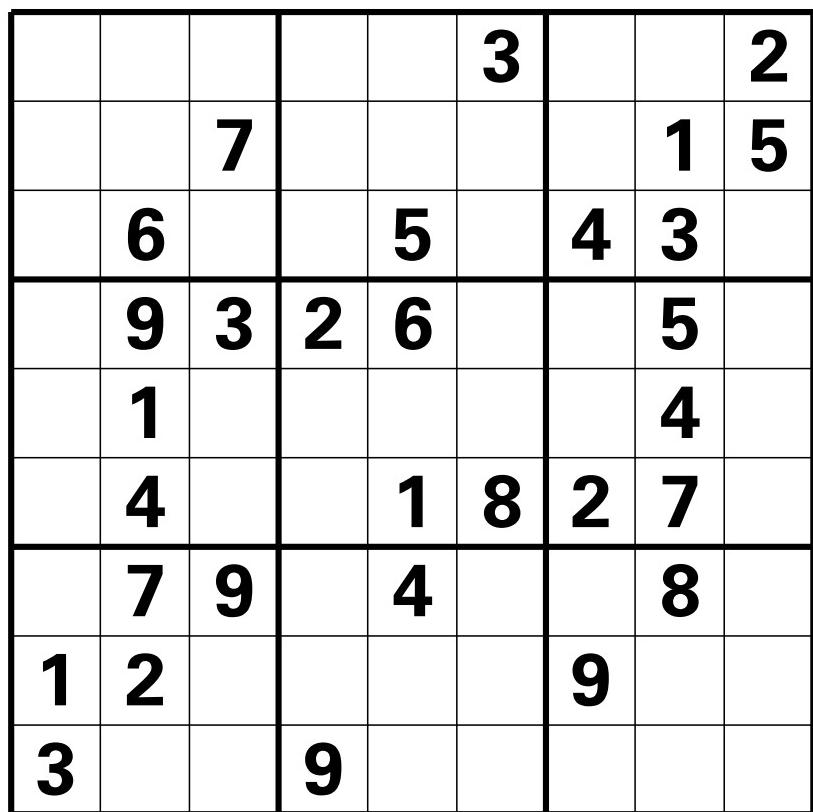
| | | | | 3 | | | | 2 |
|---|---|---|---|---|---|---|---|---|
| | 7 | | | | | | 1 | 5 |
| | 6 | | 5 | | 4 | 3 | | |
| 9 | 3 | 2 | 6 | | | | 5 | |
| 1 | | | | | | | 4 | |
| 4 | | | 1 | 8 | 2 | 7 | | |
| 7 | 9 | | 4 | | | | 8 | |
| 1 | 2 | | | | | 9 | | |
| 3 | | 9 | | | | | | |

Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

# Twenty-Twenty

Solution, page 3
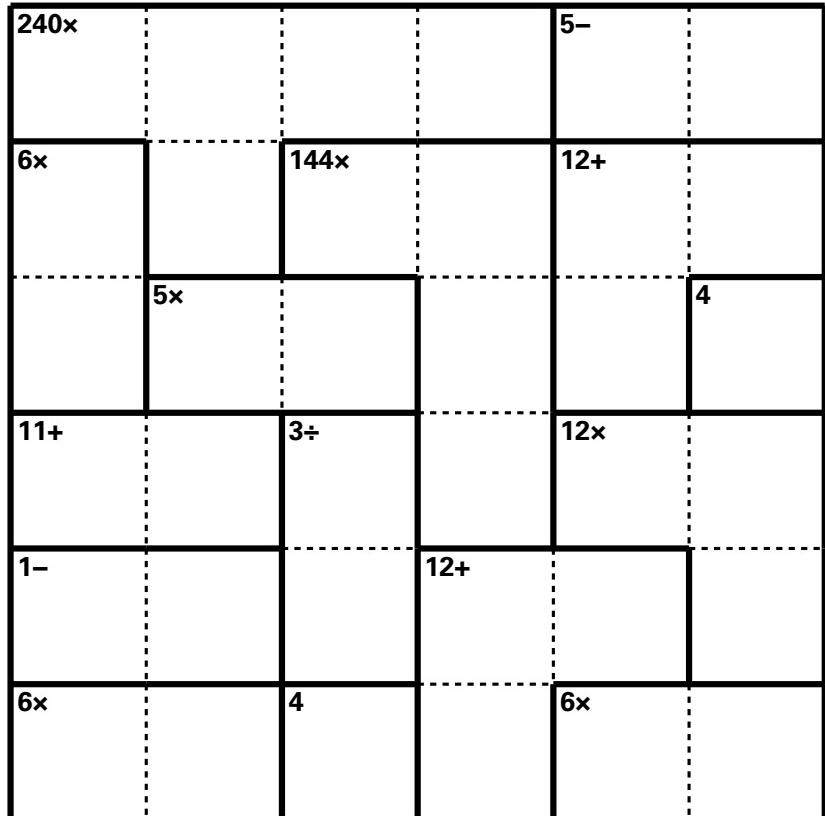
| 240× | | | | | 5– |
|---|---|---|---|---|---|
| 6× | | 144× | | 12+ | |
| | 5× | | | | 4 |
| 11+ | | 3÷ | | 12× | |
| 1– | | | 12+ | | |
| 6× | | 4 | | 6× | |

Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–6. Follow the mathematical operations for each box.

# Head-To-Toes by Addison Hayes

Solution, page 3

**ACROSS**
1 Engineering school, for short
5 Clock face
9 Beginning meaning "eight"
13 Farmland measure
14 Strummed instrument
15 Complain (about)
16 It keeps rain out of a flue
18 Sandpaper surface
19 More comfy to live in
20 Vicinity
22 Masseuse's employer
23 Devour, with "down"
25 Baby bird's sound
27 Ruckus
29 Train track support
33 Baseball batters' ploys
35 Warning sign on a door
36 Mediocre
37 "Me too!"
38 Cast a ballot
42 Magician's exclamation
44 Seize control of
45 20-minute films
49 Aunt, in Spanish

50 Kept chilled, as wine
51 Adolescents
53 Attentive treatment, for short
54 Short-lived crazes
58 Cause to move forward
61 Comedian Rudner or actress Hayworth
63 Car parts that slow you down
65 Barge __ (disturb)
66 Worthy of a ghost story
67 Tulsa's state: Abbr.
68 Socially awkward one
69 Silly, annoying person
70 Toward Kansas, from Missouri

**DOWN**
1 Gauge on a car's dash
2 Rebound of a sound
3 Deep reds
4 Prevent from escaping
5 When the sun is up
6 Ancient Andes dweller
7 Slightly open, as a door

8 Trot easily
9 Texter's "Holy cow!"
10 Old-time tummy tightener
11 Capital of Taiwan
12 Preserved with a cassette
14 Baseball great Yogi
17 Gets closer to
21 Exotic smoothie berry
24 Complete a race
26 Sets with LCD screens
27 Belly muscles
28 Musical twosome
30 State-sponsored game
31 Clever comeback
32 Tic-tac-toe nonwinner
34 Discussion subject
37 __ Moines, IA
39 Defeated in a debate
40 One less than quadri-
41 Air quality agcy.
43 Lagoon's coral barrier
44 People logging in
45 Alternative to Aleve
46 Connected to the Web
47 Contest winner
48 Wild West Show structure
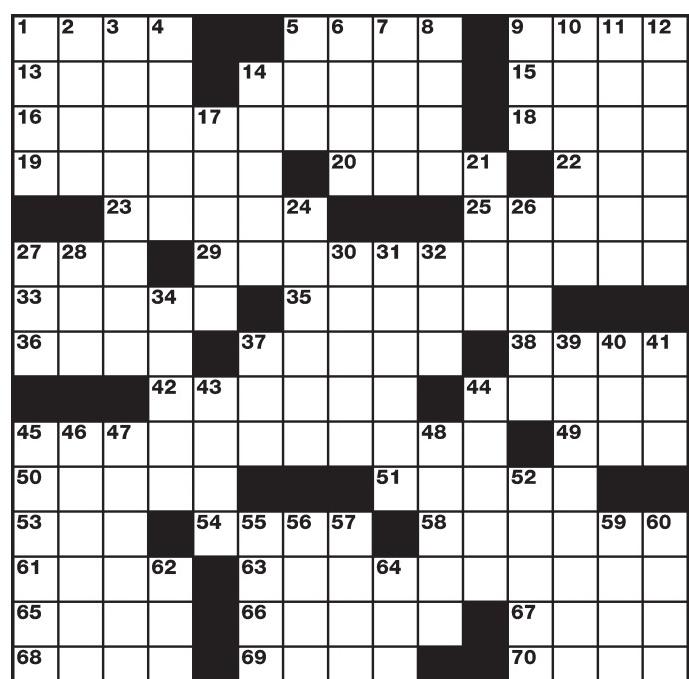
52 "Ain't gonna happen!"
55 Conspire in crime
56 Doodled, say
57 Dress of India
59 Electrified swimmers

60 Aspiring lawyer's exam: Abbr.
62 Sentence extender
64 Box with bandages and gauze

# [557] Students
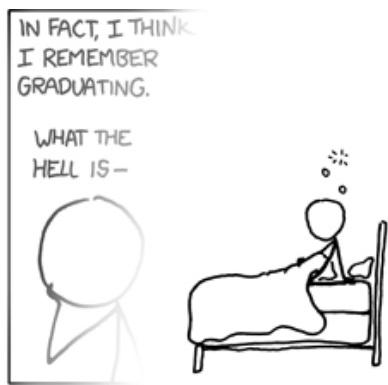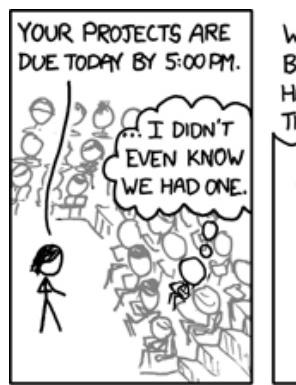


FUN FACT: DECADES FROM NOW, WITH SCHOOL A DISTANT MEMORY, YOU'LL STILL BE HAVING THIS DREAM.

**xkcd**
A WEBCOMIC OF ROMANCE, SARCASM, MATH, AND LANGUAGE
by Randall Munroe

The same goes for the one where you're wrestling the Green Ranger in the swimming pool full of Crisco. You guys all have that dream, right? It's not just me. Right?

# ihtfq
by Jaeho Kim '20

a comic about life in qvarantine

## Goodbye Everybody



# Hey Look Ma
Solution, page 3



Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–6. Follow the mathematical operations for each box.

# We Made It!
Solution, page 3



Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

# xkcd
**A** *WEBCOMIC OF ROMANCE, SARCASM, MATH, AND LANGUAGE*

by Randall Munroe

## [1052] Every Major's Terrible



Someday I'll be the first to get a Ph. D in "Undeclared."

FUNFUNFUNFUN **Fun** FUNFUNFUNFUNFUNFUNFUNFUNFUNFUNFUNFUNFUNFUNFUNFUNFUNFUN

ARTS ARTS ARTS ARTS **Arts** ARTS ARTS ARTS ARTS

## MOVIE REVIEW

# Not your traditional love story

Wu's *The Half of It* embraces the confusion and nonlinearity of teenage feelings

★★★★☆

**The Half of It**

**Directed by Alice Wu**

**Screenplay by Alice Wu**

**Starring Leah Lewis, Daniel Diemer, Alexxis Lemire**

**Rated PG-13**

**Streaming on Netflix**

**By Lulu Tian**
*ASSOCIATE ARTS EDITOR*

*The Half of It* is director and screenwriter Alice Wu's first film since her 2004 debut film *Saving Face*, which broke unspoken boundaries with its portrayal of an Asian, lesbian couple. Her new story is beyond a classic high school rom-com, exploring the youthful longing for love and something more. These emotions, captured by the actors' realistic performances, perfectly tap into teenage confusion and self-discovery.

The film is set in a rural town called Squahamish, where protagonist Ellie Chu (Leah Lewis) lives with her single father. She accepts the inherent isolation that comes with being the only Asian person and ghost writer for her high school peers'

essays. When Paul (Daniel Diemer), a football player, approaches Ellie for help writing love letters to a girl named Aster (Alexxis Lemire), they form a conning duo and an unlikely friendship. However, as the letters build up, Ellie, posing as Paul, finds herself developing a deeper connection with Aster. This comical and stressful situation forces the three characters to reflect on their relationships as well as themselves.

Throughout the film, the characters struggle with feeling stuck in their unfulfilling but familiar lives. Daily routines, familial expectations, and discrimination are tolerated in Squahamish, a town seemingly as old-fashioned and rustic as the nostalgic idea of writing love letters. The wistful setting is established with shots capturing the long-stretching railroad and Ellie biking among vast hills and trees, all with a faded, musty wash of colors.

The town frozen in time is juxtaposed with the realistic youthfulness with which Ellie, Paul, and Aster are portrayed. Leah Lewis as Ellie feels especially honest, from the modest styling of her outfits to the quiet strength of her deep voice and wide eyes. Lewis and Diemer have unparalleled chemistry as Ellie and Paul, who have the most heartwarming friendship and growth throughout the film. The film's focus on their interaction shows that Wu wrote The Half of It to look beyond love interests and tap into the inevitable self-realizations when developing feelings for someone else.

The exploration of LGBTQ identity through Ellie's literal hiding behind "Paul's" letters avoids being too cliché as the film shows Ellie's charade extending to other

parts of her life. The somewhat montage-y back-and-forth exchanges of letters — and later, text messages — are a little tiring but provide some funny moments due to Paul's endearingly clumsy personality. Undertones of religion, with scenes in Church and an emphasis on Aster's family being religious and conservative, add further layers to the characters' personalities and conflicts. The film treads the tricky line of representation and succeeds in offering an organic glimpse of a teenage girl who is

questioning her identity, without making it an overt message story.

Wu proves to be a writer and director who can purposefully capture tricky, in-between feelings and extrapolate their importance. *The Half of It* is satisfyingly real because it recognizes teenage love as often unsuccessful, longing for truths that are not apparent yet. But there's nothing wrong with that: even if the lead does not get the girl or even get to understand themself, there is still a story worth being told.



*KC BAILEY*

**Leah Lewis stars in Alice Wu's new film** *The Half of It*, now streaming on Netflix.